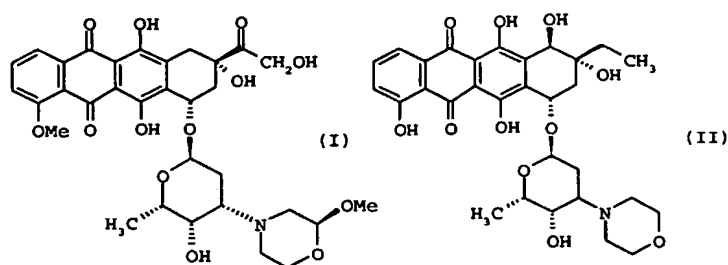


Claims

1. A combined preparation comprising a morpholinyl anthracycline derivative having formula (I), formula (II)

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a pharmaceutically acceptable salt or a pharmaceutically active metabolite thereof, administered in combination with radiation therapy.

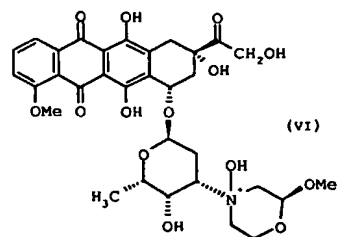
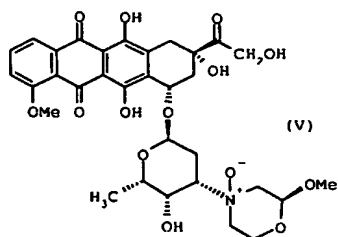
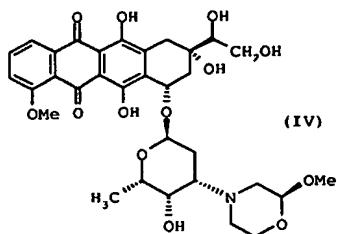
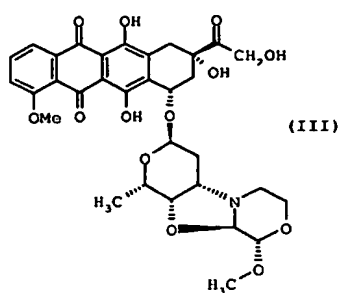
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2. A combined preparation according to claim 1, wherein the morpholinyl anthracycline is of formula (I).

3. A combined preparation according to claim 2, wherein the salt is the hydrochloride salt.

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4. A combined preparation according to claim 1, wherein the metabolite is a metabolite of the morpholinyl anthracycline derivative of formula (I) selected from the compounds of formulae (III) to (VI)



5. A combined preparation comprising a compound of formula (III), (IV), (V) or (VI) as defined in claim 4, administered in combination with radiation therapy.
6. A combined preparation according to claim 1, for use in the treatment of cancer.
7. A combined preparation according to claim 5, for use in the treatment of cancer.
8. Use of a morpholinyl anthracycline derivative having formula (I), formula (II), a pharmaceutically acceptable salt or a pharmaceutically active metabolite thereof as defined in claim 1, as radiosensitizer.
9. Use according to claim 8, wherein the morpholinyl anthracycline derivative is of formula (I).

10. Use according to claim 9, wherein the salt is the hydrochloride salt.

11. Use of a morpholinyl anthracycline derivative of formula (I), formula (II), a pharmaceutically acceptable salt or a pharmaceutically active metabolite thereof as defined in claim 1, in the preparation of a medicament in combination with radiation therapy for simultaneous, separate or sequential use for the treatment of cancer.

12. A method of treating a mammal including a human, suffering from a cancer comprising administering to said mammal a morpholinyl anthracycline of formula (I), formula (II) or a pharmaceutically acceptable salt or pharmaceutically active metabolite thereof as defined in claim 1 and radiation therapy in amounts effective to produce a synergistic anticancer effect.

13. A method according to claim 12, wherein exposure to radiation therapy may either occur simultaneously whilst administering the medicament comprising the morpholinyl anthracycline derivative or, alternatively, sequentially in any order.

14. A method of treating a tumor in a subject in need thereof, comprising sequentially, separately or simultaneously administering

(a) a morpholinyl derivative of formula (I), formula (II) or a pharmaceutically acceptable salt or metabolite thereof as defined in claim 1 to said subject and

(b) radiation therapy to said tumor, said morpholinyl derivative being administered to said subject in an amount effective to potentiate said radiation therapy.

15. A method according to claim 12, wherein the cancer is a primary or metastatic liver cancer.

16. A combined preparation as claimed in claim 1, which further comprises administering a therapeutically effective amount of a platinum alkylating agent.

17. A combined preparation according to claim 16, wherein the platinum alylating agent is selected from cisplatin, carboplatin, oxaliplatin, nedaplatin and lobaplatin.

- 5 18. A combined preparation according to claim 17, wherein the platinum alylating agent is cisplatin.